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FINANCING FAMILY DOCTOR CARE

It is very right and proper to discuss ideal family doctor care, but some method must be devised for paying for it. A conference in London in October dealt with the various systems of financing this type of care, and participants attended from many countries of the world. It was organized by the *Medical World,* a London medical journal, and it is interesting to compare the statements made at the conference on behalf of the British, United States and Soviet Union systems. Leading speakers for Britain seem to have been university teachers in social administration, and one of these, Dr. Abel-Smith, made a number of provocative remarks about the medical profession and its payment, as befits someone from the London School of Economics. This speaker remarked that the different systems of paying doctors to be found throughout the world were to a very large extent the consequences of collective bargaining between representatives of doctors and representatives of patients. Much depended on who had produced the first organization and who had the political lobbying power. He thought it remarkable that the principal methods of payment held to be the best traditionally were so often the best financially. He also said that Medicine and the Law were two occupations in which the receipt of tips had become formalized and gained general respect. Statements such as the above were no doubt entertaining to the audience, but it is doubtful whether they are significant or helpful; it seems odd to consider that a fee paid for a service rendered should be classified as a tip. However, Dr. Abel-Smith did make some very pertinent points in suggesting that to decide whether payment should be by capitation fee, fee for service or salary, patients should ask whether the system encouraged good diagnosis, adequate consultation, continuity of care, continuing education of the doctor and the proper practice of psychosomatic medicine. No doubt there are some geniuses capable of asking these questions and answering them. So far, however, no one has succeeded in doing so.

S. S. B. GILDER

MEDICAL NEWS IN BRIEF

FAILURE OF PROLONGED TREATMENT OF CHRONIC URINARY-TRACT INFECTIONS WITH ANTIBIOTICS

Chronic urinary tract infections are commonly associated with pathological conditions such as structural abnormalities of the urinary tract, renal calculi, diabetes mellitus, repeated instrumentation or surgical manipulation, or with pregnancy. Chronic urinary infection is not uncommon in the absence of any of these predisposing conditions, or after their correction, and is often refractory to antimicrobial therapy, or recurs after cessation of treatment.

It has been postulated that chronic urinary tract infection may be analogous to subacute bacterial endocarditis in which organisms are sequestered within the fibrous tissue of the heart valves. It has also been suggested that the brief courses of therapy commonly used to treat urinary sepsis may not be adequate for elimination of bacteria from the renal tissue. Turck *et al.* (*New Engl. J. Med.,* 267: 999, 1962) undertook to determine whether prolonging therapy for a period of six weeks would result in a higher incidence of cures and in a diminution of recurrences.

Forty patients with chronic Gram-negative bacilluria were treated for six weeks with demethylchlortetracycline, chloramphenicol or an oral derivative of kanamycin (kanamycin-3-phenyl salicylate). Twenty-five of the 40 became abacteriuric during treatment, but only eight (20%) were bacteria-free six weeks after therapy. The remaining patients demonstrated either persistence of the initial pathogen (21 cases), or replacement of the initial pathogen by another bacterial species or different serotypes of the same species (11 cases). Patients who became abacteriuric did so within the first two weeks of therapy, and continuation of treatment after that period in patients with persistent bacteriuria was futile.

HASHIMOTO'S THYROIDITIS

Hashimoto's thyroiditis is considered to be an autoimmune disease because high titres of circulating thyroid antibodies are present in the serum, and because a similar lymphocytic thyroiditis occurs in animals immunized with Freund's adjuvant and saline extracts of homologous thyroid glands. For these reasons, cortisone would be expected to be of value in treatment.

Pharmacologic doses of cortisone were administered by Blizzard *et al.* (*New Engl. J. Med.,* 267: 1015, 1962) for six months to three adolescent females with Hashimoto's thyroiditis. Before treatment the patients showed evidence of hypothyroidism and had large, firm goitres; the diagnosis was confirmed by biopsy. The 24-hour I^{131} uptakes were normal but did not increase with administration of thyroid stimulating hormone (TSH). Significant dumping of I^{131} with potassium thiocyanate (KSCN) administration occurred in the two patients in whom this procedure was evaluated. Within three weeks of treatment their thyroid glands were barely palpable. The thyroxine-binding protein did not change during therapy, but the protein-bound iodine and butanol-extractable iodine became normal, and the patients were clinically euthyroid. The levels of agglutinating, complement-fixing and thyrocytotoxic antibodies progressively fell. However, the I^{131} did not change significantly or increase with TSH stimulation, and I^{131} dumping with KSCN was still demonstrable in all three patients.

Despite the rapid improvement of the clinical picture of Hashimoto's thyroiditis after treatment with adequate dosage of cortisone, there was prompt regression with cessation of therapy or with significant dosage reduction. Desiccated thyroid remains the agent of choice for the treatment of patients with this disease.

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T.C.M.P. TO HOLD MIDWINTER CONFERENCE

Plans have now largely been completed by Trans Canada Medical Plans for its first Midwinter Conference, scheduled for February 11 and 12 in Toronto.

Based on the theme "Prepayment in '63", the conference will attempt to examine all the facets of prepayment as related to medical practice and, at the same time, to consider the most feasible methods for extending and improving coverage for all citizens.

In essence, a family gathering between representatives of the various Divisions of the C.M.A. and the profession-sponsored plans, the conference, under the chairmanship of Dr. J. A. MacDougall of Saint John, New Brunswick, is expected to attract about 100 participants.

THE TRI-SERVICE MEDICAL MUSEUM

The opening of a Tri-Service Medical Museum at the Canadian Forces Medical Service Training Centre, Camp Borden, will be of interest to former medical officers of the Royal Canadian Navy, Army, and Royal Canadian Air Force. The Museum is unique in that it is believed to be the only museum in Canada dedicated to the Medical Services of the R.C.N., Army and R.C.A.F. It is appropriate that it is located at the Canadian Forces Medical Service Training Centre, Camp Borden, as the centre is largely responsible for the training of medical personnel of the three services.

At the present time the Museum is mainly stocked by items inherited from the R.C.A.M.C. School Museum. In an appeal for support, the Museum Committee points out the paucity of items relative to medical operations of the R.C.N. and R.C.A.F., in the hope that former members of these two services, as well as members of the Army, will support their efforts. Suggested items of interest to the Committee are uniforms and accoutrements worn by medical officers, historical records, photographs, medical instruments and other paraphernalia of war. Items should be sent to: The Curator, Canadian Forces Medical Service Museum, Canadian Forces Medical Service Training Centre, Camp Borden, Ontario.

ACTION OF CERTAIN ANABOLIC DRUGS AND PREDNISONE IN THE CHRONICALLY ILL AND IN THE AGED WITH OSTEOPOROSIS

The effects of an anabolic agent and of prednisone were compared in 14 patients who had been immobilized for many years. Two of the patients were over 80 years. The study covered a period of six months during which methandrostenolone (Danabol, Ciba), prednisone, testosterone and again prednisone were successively administered. Rutschmann and Delachaux (*Schweiz. Med. Wschr.*, 92: 1274, 1962) found that the androgens and prednisone retained their respective anabolic and catabolic effects even in the very old patients

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(one was 86 years) and also when the patient had been completely immobilized for many years. Methandrostenolone, 10 mg. daily, for 81 days, and testosterone, 100-200 mg. intramuscularly, once a week, did not produce any secondary undesirable side effects such as virilization or water retention.

Rutschmann and Delachaux stress the effectiveness and value of this hormonal treatment in certain metabolic disorders, particularly of bone, that are associated with old age or prolonged immobilization. Even greater care is urged by them in the use of prednisone in the older age group and in chronically immobilized patients, because it aggravates still further their tendency to catabolism and to increased calciuria.

TREATMENT OF CHRONIC PYELONEPHRITIS

Statistics from various medical clinics in Switzerland as well as from pathological institutes show a marked increase in the number of cases of pyelonephritis admitted to hospital in recent years and in the number of cases found at autopsy. Whereas there were 156 cases in the Medical Clinic at Basel in the years 1946-1950, there were 220 cases in the years 1956-1960. In addition, there were also 217 patients with interstitial nephritis hospitalized in the years 1956-1960, half of whom had definite bacteriuria.

Thölen (*Schweiz. Med. Wschr.*, 92: 1226, 1962) has put forward some general principles governing the treatment of severe cases of bacterial nephritis. He stresses that the patient should be kept in hospital until uremia has been brought under complete control by dietary and other means. Protein intake should be restricted to 0.5 g./kg. of body weight per day until the blood urea nitrogen value has become stabilized. Then the protein intake is increased to 1 g./kg. of body weight per day. A high carbohydrate and normal fat diet should cover the patient's caloric requirements, and salt and fluids may be given as required.

An antibacterial agent should be selected from among those to which the micro-organisms are sensitive. In addition, the toxicity of the agent has to be carefully weighed in the face of the patient's reduced renal function. In six years of extensive use of chloramphenicol, Thölen noted that there were no toxic effects in uremic patients. He found it by far the most valuable antibiotic in chronic pyelonephritis.

The use of anabolic agents is recommended by Thölen partly because of their beneficial influence on nitrogen balance and also on the psyche and appetite.

MEDICAL CARE OF THE ADOLESCENT

A five-day Postgraduate Course on the Medical Care of Adolescents will be given at the Adolescent Unit at the Children's Hospital Medical Center, Boston, Mass., U.S.A., from April 29 to May 3, 1963.

This intensive course of instruction is designed to cover the diagnosis and treatment of many disorders common in adolescence,

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as well as various aspects of the understanding and evaluation of boys and girls who are between 12 and 21 years of age.

The methods of instruction will include case presentations, discussions, question periods, and lectures. Among the subjects to be covered are obesity, menstrual problems, management of the adolescent's office visit, skin problems, physiological and psychological characteristics of adolescence, school failure, cardiac, gastrointestinal and endocrine disorders, scoliosis, athletic injuries and other orthopedic problems, and the treatment of everyday personality and emotional difficulties.

The registration fee is $5.00 and the tuition, $150.00. An additional charge of $25.00 is made to cover the cost of meals. Apply to Assistant Dean, Courses for Graduates, Harvard Medical School, Boston 15, Mass., U.S.A.

INTRAVENOUS GAMMA GLOBULIN

With the expanding use of gamma globulin for the prophylaxis and treatment of various infections, cases frequently occur which require it to be administered in relatively large doses. Intramuscular administration of large amounts is difficult and there are limitations.

Attempts have been made from time to time to inject gamma globulin intravenously, and the reported experience of intravenous administration of gamma globulin has been summarized by Schultze and Schwick (*Deutsch. Med. Wschr.*, 87: 1643, 1962). The severe toxic reactions were believed to be due to the physical characteristics of the preparations; attempts have therefore been made to improve the solution and to make it less toxic. Schultze and Schwick have developed a new intravenous solution of gamma globulin and describe its properties, as determined by ultracentrifuge, Tiselius-electrophoresis and immunoelectrophoresis. Removal of the complement-fixing property of the globulin was achieved, and this was proved by direct and indirect methods. Satisfactory levels of antibodies are present in this new preparation, which is free of pyrogenic substances.

During the past year systematic clinical investigation in respect of its tolerance was carried out. It was found to be well tolerated by all of 169 patients who received a total of 684 intravenous injections of 5-50 ml. of a 5% solution of this preparation (gamma-venin). In one series 20 patients were given 5 ml. of gamma-venin intravenously on three successive days and a few days later a fourth injection; no evidence of intolerance was produced. In another group, 20 patients who were known to be sensitive to ordinary gamma globulin were given 15 infusions each, and only occasionally were these infusions followed by the experience of subjective symptoms or the occurrence of a slight elevation of temperature.

The advantages of intravenous administration of gamma globulin are its rapid action and the greater certainty of optimal utilization of the material. Schultze and Schwick especially recommend this method for those patients to whom large doses must be given.

MOTOR PARALYSIS IN DIABETES MELLITUS

Although paresis caused by diabetic neuropathy has generally been considered rare, Bischoff (*Deutsch. Med. Wschr.*, 87: 1793, 1962) has been able to find in a series of 200 diabetics with neuropathies 94 with unquestionable motor affection.

In order of frequency of involvement, the quadriceps femoris muscle headed the list with 48 cases; it was followed by the muscle of the calf, the ileopsoas muscle, the small muscles of the hand and the adductors of the thighs. In many of the patients the weakness was quite severe and in approximately one-half the lesions were bilateral. Atrophy was sometimes quite marked and yet was overlooked on occasion, even when present in the hands. Hyporeflexia and disappearance of tendon reflexes, a well-documented phenomenon in diabetic neuropathy, is usually very marked in these cases. In 16 patients isolated hyporeflexia or loss of knee jerks preceded the appearance of other abnormalities including weakening of the ankle reflexes.

Sensory disturbances are almost always associated with paresis in the "distal" extremities. Especially typical is the finding of loss of temperature and pain sensation in a patchy or a stocking/glove distribution. Paresthesia is not rare, and pain, especially of a lancinating character and usually coming on at night while the patient is in bed, is oftentimes very severe. Muscle cramps, especially of the thigh and calf muscles, are also very common. No correlation with the degree of metabolic disorder or the duration of diabetes has been established.

ALKALINE PHOSPHATASE ACTIVITY OF POLYMORPHS IN MONGOLISM

The alkaline-phosphatase activity of the neutrophilic polymorphonuclear leukocytes was compared by King, Gillis and Baikie (*Lancet*, 2: 1302, 1962) in mongols and non-mongol mental defectives. They found that the activity of the enzyme in the polymorphonuclear leukocytes of mongols was signifi-

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cantly higher. The alkaline phosphatase levels showed no correlation with either the total leukocyte count or the absolute neutrophil count. The higher levels in mongols were therefore unlikely to be due to the greater frequency of pyogenic infections in mongols.

These and similar results already published make it likely that chromosome-21 normally carries genes which influence the alkaline phosphatase activity of the polymorphs. This interpretation is related to knowledge of the alkaline phosphatase activity of polymorphonuclear leukocytes in chronic myeloid leukemia, in which disease loss of material from the same chromosome is commonly associated with low or absent activity. Normal or even increased alkaline phosphatase activity in the polymorphonuclear leukocytes in chronic myeloid leukemia is less well known but does occur. Consideration of all these results suggests that polymorph alkaline phosphatase activity is subject to a complex control and is not determined solely or mainly by the activity of genes at a single locus.

UNILATERAL RENAL ATROPHY SUBSEQUENT TO RENAL ARTERIOGRAPHY

McCallister, Hunt and Kincaid (*Proc. Mayo Clin.*, 37: 323, 1962) have reported an instance of acute renal failure and subsequent unilateral renal atrophy developing in a patient after renal arteriography by the retrograde method. The patient had roentgenographic evidence of bilateral intimal fibrous stenosis of the renal arteries. Histologic confirmation was obtained at the time of surgical removal of the ischemic and contracted kidney. Subsequently, splenorenal arterial bypass distal to the area of stenosis in the left renal artery resulted in relief of the patient's hypertension. McCallister *et al.* suggest that either unilateral or bilateral occlusive lesions of the renal arteries with associated renal ischemia may potentiate the sensitivity of the renal parenchyma and result in untoward reactions to contrast medium used for translumbar or retrograde aortography and renal arteriography.

An additional factor which may have played a role in this case is the fact that a closed-end catheter was used and the catheter tip may have been positioned in such a manner that the contrast medium emanating from the side holes was aimed directly at the ostia of the renal arteries. Since their experience with this case, the authors report that more than 200 arteriograms have been performed by means of a modified technique whereby an open-end catheter with side holes has been inserted percutaneously; no renal complications have occurred.

The refinement of such relatively harmless diagnostic procedures as the radioisotope renogram and differential clearance studies has reduced the need for renal arteriography as a screening procedure in most hypertensive patients. However, at the present time direct visualization of the renal vessels continues to be an invaluable aid in the study of renovascular hypertension.

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SCALENE LYMPH NODE INVOLVEMENT IN COCCIDIOIDOMYCOSIS

There are only two previous reports of coccidioidomycosis with positive scalene node biopsy, and in both no information was included from the clinical point of view with respect to extension of disease. Coburn, in the *Annals of Internal Medicine* (56: 911, 1962), has described six cases in which the diagnosis of coccidioidomycosis was made by scalene node biopsy. Only two of the patients suffered from disseminated disease. A third had pulmonary residual disease which remained stable over a period of observation and control lasting two years. In the other three patients, although the suspicion of dissemination appeared to be justified, the clinical course and multiple serologic studies provide no evidence of such dissemination. Coburn concludes that these patients had benign primary coccidioidomycosis.

These data, as well as a review of the clinical and pathologic evidence in the literature, indicate that involvement of the scalene nodes can occur in coccidioidomycosis not only in cases of the disseminated type of disease but also in cases of benign primary infection. Scalene node biopsy is therefore possibly a useful method for the early diagnosis of coccidioidomycosis. With respect to prognosis, other clinical and serologic observations are more important.

TROPICAL DISEASES IN EUROPE

The number of tropical diseases seen at the Clinic for Ship and Tropical Diseases in Hamburg is reported to be increasing. Conditions that were at one time very rare in Central Europe are now more common because of air travel, according to Mohr (*Wien. Med. Wschr.*, 112: 309, 1962). Smallpox which was diagnosed in 1957 in a German technician who returned from India received wide publicity in the medical as well as the general press. What was important in this case was that several doctors saw the patient before the diagnosis was finally established in the clinic, and none of them thought of smallpox. In March 1961 an Indian ship's crew was flown from Bombay to Hamburg after having been vaccinated against smallpox. When one of this crew was found to have a vesicular eruption seven days later, the first doctor who was called in quarantined the hotel. Fortunately it was possible to exclude smallpox and to establish a diagnosis of chickenpox by virologic examination.

Although rapid travel from the Orient has made it possible for cholera, plague and yellow fever to be brought to Europe in the incubation stage, fortunately no such cases have appeared to date. Leprosy has been seen in Hamburg, but the affected persons were not from tropical countries but from the Baltic where a few foci of leprosy have existed for many years.

Two forms of leprosy are distinguished, the lepromatous, in which the lesions are rich in bacilli, and the tuberculoid form, in which

very few bacilli can be found. The latter has a much more favourable prognosis and responds better to treatment.

Malaria has always been seen in Europe, in persons from a variety of countries. It has been seen less frequently in recent years. In the Tropical Institute in Hamburg no fewer than 25-30 cases a year have been diagnosed in recent years. While tertian malaria is relatively harmless, tropical malaria even today has a grave prognosis, especially if not recognized in time. A large proportion of the patients who were sent to the Tropical Institute in the last three years and who were found to have tropical malaria were referred with such diagnoses as grippe, pneumonia, paratyphus, paratyphoid, enteritis, hepatitis, fever with liver damage, meningitis, apoplexy and coma.

Next in importance of all tropical infections is amebiasis. Among 2000 returnees from the tropics a single examination disclosed some 5% to be infected with ameba. Of the 92 infected, 19 had involvement of the liver (two had liver abscess and two amebic hepatitis).

Although trypanosomiasis (sleeping sickness) is rarely diagnosed in Europe, the occasional case is observed. Leishmaniasis, and especially its visceral form (kala azar), is rarely seen. More than 25% of all returnees from the tropics have worm infestation. Eosinophilia in a person who has returned from the tropics should cause one to consider first of all worms and only after that asthma or urticaria. Although ascariasis and other infestations are frequent, it is the infection with the bilharzia organism that causes most concern. Both the urinary and the intestinal form have been seen in persons returning from the Middle and Far East. The highest degree of eosinophilia was seen in persons with filariasis (30-55%) and in patients infected with *Fasciola hepatica* (40-85%). The latter causes, in addition, high fever and severe pain in the liver region.

Spotted fever in its various forms is seen occasionally, and on one occasion all of the members of a tour to Greece came down with Q fever.

Early recognition is important, since effective treatment is available for many of the diseases.